

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
ETC Annual Reports and Certifications)	WC Docket No. 14-58
)	
Establishing Just and Reasonable Rates for Local Exchange Carriers)	WC Docket No. 07-135
)	
Developing a Unified Intercarrier Compensation Regime)	CC Docket No. 01-92
)	

**INITIAL COMMENTS OF
VANTAGE POINT SOLUTIONS AND ITS AFFECTED CLIENTS**

Vantage Point Solutions (VPS)¹ hereby submits its initial comments in the above Further Notice of Proposed Rulemaking (FNPRM) on behalf of the following VPS clients.² This FNPRM greatly impacts many of VPS clients and their customers who are dependent on them to provide robust broadband service, often in the most sparsely populated locations in rural parts of the United States. Without universal service support, these VPS clients would not be able to provide advanced broadband services in their rural areas.

Introduction and Background

¹ VPS is an engineering and consulting company headquartered in Mitchell, South Dakota, representing over 400 clients in the US, including many RLECs and ISPs that file Form 477 and receive legacy USF, ACAM and CAF II support.

² Armstrong Holdings, Inc., Clarence Telephone Company, Craigville Telephone Company, Inc., Farmers Telephone Company of Batavia, IA, IAMO Telephone Company, Interstate Telecommunications Cooperative, Inc., Minburn Telecommunications, Inc., Pembroke Telephone Cooperative, South Slope Cooperative Communications, Venture Communications Cooperative, and Webster-Calhoun Cooperative Telephone Association

On December 13, 2018, the Federal Communications Commission (“Commission” or “FCC”) released its Report and Order, Further Notice of Proposed Rulemaking and Order on Reconsideration in the above matter (“Order”). In the Order, the Commission eliminated its 100% overlap rule.³ In its place the Commission intends to Auction, like the CAF II 903 Auction, the USF support of carriers that are almost entirely overlapped by unsubsidized competitors. The Commission proposes to use Form 477 service data to determine which study areas are almost entirely overlapped. The Commission declined to formally codify a rule for this process and instead seeks comment on several key issues in this FNPRM.

VPS provides comment and factual support herein that: (1) FCC Form 477 information should not be relied on solely to determine whether a study area is “entirely or almost entirely overlapped” without a challenge process because 477 data is not accurate or reliable enough to use for such a purpose; and (2) if the Commission plans to use Form 477 data to determine competitive overlap and reductions to ACAM II model offers and legacy support, the Commission must take steps to improve the accuracy of 477 data, including establishing an audit mechanism to better validate the accuracy of 477 filings and increase the penalties for the erroneous filing and certification of the Form 477.

1. A Challenge Process is Necessary to Determine Competitive Overlap Because Form 477 Data Alone is Unreliable for this Purpose and Ramifications are Significant to Carriers and Impacted End Users

a. Competitive Overlap Impacts to Incumbent Providers and End Users are Significant and Outweigh any Administrative Burden of a Challenge Process

³ 47 CFR §54.319 (a) through (c)

The FCC's conclusion that the benefit of a challenge process would not outweigh the administrative burdens of conducting such process⁴ may be reasonable when looking at the impacts to FCC resources. However, this focus does not consider the substantial service impacts to end users and financial impacts to incumbent carriers.

While it may be true that a challenge process does use significant resources, it is also vitally important and in the public interest to determine accurately if a provider is truly entirely overlapped. The elimination of USF support to small rural providers can have dramatic impacts on the companies and the customers they serve with that support.⁵ These rural areas cannot support broadband networks without funding support. Loss of that support may mean providers will be forced to eliminate plans to bring broadband service to areas that lack a business case without support or will lead to substandard service or deterioration of service over time.

The Commission is assuming that all broadband service is equal between any incumbent and an unsubsidized competitor. In VPS experience that is not true. In most cases the unsubsidized competitors that entirely overlap incumbents are fixed wireless carriers (FWCs) that do not have the same quality of service, if they are even providing any mediocre service at all, to areas they claim to serve on their 477 filings.

Specific examples of individual company impacts include the potential loss of approximately \$780,000 annually by Webster-Calhoun Cooperative Telephone

⁴ *Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration ("Order")*, FCC 18-176, Para. 52 (2018)

⁵ "Misleading data from internet service providers is cutting Iowa off from billions in broadband subsidies. Other states could be missing out, too. A New Food Economy investigation", <https://newfoodeconomy.org/rural-iowa-broadband-data-fcc/>, (June 20, 2018). This article cites examples of end users, including photographers and farmers, lacking access to broadband in areas deemed served.

Association (WCCTA), an Incumbent Local Exchange Carrier (ILEC) located in Gowrie, IA, and approximately \$470,000 annually by another rural ILEC, Clarence Telephone Company of Clarence, IA (CTC). These amounts represent the estimated potential reductions in any ACAM II offers based on competitive overlap from 477 data in these two ILECs' study areas.

It is unclear if the 477 filer in both of these cases, Breeze Broadband Communications, Inc., (Breeze) ever provided qualifying service in these two study areas, but Breeze did report numerous census blocks as served locations in its December 2017 477 filing. Breeze does not provide broadband and voice service in these study areas today. In fact, when VPS called the Breeze service phone number, the company shared it no longer operates as a broadband provider in the state of Iowa, and confirmed this as indicated in Exhibit A, the attached communication to WCCTA by the now defunct company.

Breeze's 477 filings alone will impact 24 incumbents in Iowa, as shown in Exhibit B, a listing of the companies and maps identifying service providers with this overlap issue. There is no FCC rule that the past Breeze 477 data will be removed from FCC consideration now that the company is defunct. Without the ability to challenge Breeze's 477 data, these rural ILECs stand to lose a substantial amount of support that is necessary for the continuation of the ILECs as stable providers of broadband and voice services to their end users.

Another example of the substantial impacts to rural ILECs is the potential loss of approximately \$380,000 annually by Farmers Telephone Company of Batavia, IA (FTCB),

an ILEC in southeast rural Iowa. Over the past year, FTCB invested \$1.9 million in a robust fiber network that covers all its customers. FTCB made this decision based on end user needs and high cost support rules in place prior to the recent USF Reform orders, as is the case for most of the VPS clients listed in Footnote 1. These companies should be provided stable USF support that, at a minimum, has the same stability as the companies who have accepted ACAM support, which continues during the full 10 years of the ACAM agreement regardless of changes in unsubsidized competitors. This consistency is necessary for the on-going stability of the companies who have made 25-30 year investments in a complete fiber buildout and have taken RUS loans or other debt to pay for it all to have the ability to provide advance broadband service to its end users.

As for the unsubsidized carrier reporting service in its study area, FTCB has done a thorough investigation and has reliable information to dispute Natel Broadband Internet's reported 477 broadband service and Natel's ability to provide voice service in this study area. FTCB has investigated Natel's capabilities in the FTCB study area through various means, including a successful 2017 overlap challenge of this competitor.⁶ Based on FTCB's investigation, study and testing within its study area, FTCB can prove again that Natel's 477 data continues to be inaccurate since the system is unchanged. FTCB requests that the Commission give them another opportunity to conduct challenge process. FTCB is likely one of the 15 incumbents that the FCC believes is almost entirely overlapped.⁷

b. VPS Clients have Significant Evidence of Inaccurate Unsubsidized Competitor 477 Data, Which Requires a Challenge Process to Correct Erroneous 477 Data

⁶ Wireline Competition Bureau Concludes the 100 Percent Overlap Challenge Process ("100 Percent Overlap Challenge Order"), DA 17-1079 (November 2, 2017)

⁷ Order, para 185

VPS agrees that Form 477 data is valuable for a variety of Commission, company, and consumer informational purposes. When the FCC first started collecting 477 data it was for just that – “informational purposes”. Now the FCC increasingly is using the data for far greater and more sensitive purposes, such as the CAF II Auction and now overlap and ACAM II support determinations.

VPS and its clients’ real-world experiences with unsubsidized competitor 477 data identifies many overstatements and inaccuracies of broadband service, especially the 477 data of FWCs. VPS clients have provided VPS with numerous examples, one of which is highlighted in Exhibit C and discussed below. In large rural census blocks, FWCs frequently overstate the census blocks covered and the speeds provided.

As stated in Section 1a above, FTCB has evidence indicating that Natel is still over reporting the speed and availability of broadband service in its study area even after its successful 2017 challenge when the service requirement was only 10/1 Mbps. It is even less likely that many FWCs will be able to support service at the FCC’s new broadband standard of 25/3 Mbps.

FTCB is not alone, and while the FCC may not prefer the challenge process, the process has worked in the past to accurately determine competitive overlap. In the last overlap challenge, 12 of the 13 carriers were able to provide clear evidence to the FCC that they were not in fact 100% overlapped contrary to what the 477 data had shown.⁸ That proceeding demonstrated that the 477 data is flawed. The impacted carriers were

⁸ 100 Percent Overlap Challenge Order

able to prove that the 477 data was not accurate and therefore, were able to keep their support and continue to provide needed and supported services.

Other 477 data, even at a cursory glance, looks suspect and should be investigated by the FCC.⁹ One such example is the 477 data filed by newcomer BarrierFree, an FWC provider that lists broadband service in its December 2017 477 data in the following states: Connecticut, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. BarrierFree reported both fiber and fixed wireless broadband service for the *exact same census blocks* at speeds of 940 Mbps down and 880 Mbps up in *all* the census blocks within each of the states listed above.

The impact of this 477 filing alone affected 62 million end user locations and may have been a significant factor in falsely showing a dramatic increase in the number of locations served by broadband in recent FCC broadband reports. BarrierFree's 477 filing is impossible and not credible, yet BarrierFree filed and certified the above as accurate. This is the most overstated coverage that VPS or its clients have ever seen. Further, VPS clients, including Pembroke Telephone Cooperative, have not seen any BarrierFree fiber construction in their areas, no cable markers or any locate flags. Pembroke has never heard of BarrierFree and is confident the company does not have fiber or any fixed wireless service in its mountainous service area. Like Pembroke, most VPS clients have never heard of BarrierFree, who according to its 477 filing has service available to much of the Northeast United States and 62 million people. The FCC needs to investigate

⁹ Free Press Letter to FCC (March 5, 2019)

BarrierFree's 477 filing and correct the overstated errors before any ACAM II offers are given. The effect of this one filing is that impactful to VPS clients.

In South Dakota, similar concerns with FWC reporting are being investigated as well. Two examples of this include scenarios affecting Interstate Telecommunications Cooperative, Inc. (ITC) and Venture Communications Cooperative, Inc. (Venture). Based on a South Dakota based FWC's 477 filings, ITC could lose approximately \$530,000 annually in ACAM II funding. For Venture, the loss could be approximately \$2 million annually in ACAM II funding. After investigations, both ILECs firmly believe that the FWC has no qualifying service coverage in their ILEC areas and that the 477 filing is in error.

It is also important to note that VPS and its clients are aware of many situations involving 477 errors that appear to be unintentional reporting errors in reporting the correct census block data, some even by rural ILECs accidentally reporting blocks outside their service areas, due to human errors, software errors or glitches in their reporting systems. In several of these circumstances, all parties agreed these were errors and the 477 data has been corrected, but maybe not in time for ACAM II offers depending on the 477 data timeframe used by the FCC. It is particularly important that recent corrections be taken into consideration prior to any ACAM II offers.

VPS and its clients are continuing to gather additional information about unsubsidized competitors' overstated coverage in their 477 filings and will share this information in its reply comments. But initial analyses indicate there are similar situations as the ones listed above affecting VPS clients in other areas of Iowa, Indiana, Pennsylvania, South Dakota, and Virginia. The estimated impacts to ACAM II offers could

range from \$350,000 to over \$2,000,000 annually, per company. Potential legacy funding impacts are still being determined.

The above examples of erroneous 477 data and special circumstances, such as a broadband provider going out of business, illustrate the important need for the Commission to base its support decisions on corrected and relevant data for ACAM II model offers and legacy support. If these errors and issues are not cleaned up before ACAM II model offers are made, it will result in unfair preclusion of rural ILECs from these offers.

2. As the Reliance on 477 Data Expands from Informational to Support Determinations, the Commission Must Take Steps to Improve 477 Accuracy, Including the Establishment of an Audit Mechanism and Increased Penalties for Certifying Inaccurate Data

a. Requiring Only One Served Location Within a Census Block to Determine it is Served Leads to a Significant Overreporting of Broadband Service and Must be Changed

According to the U.S. Census website, a census block can encompass up to hundreds of square miles in a rural area. Therefore, current FCC rules and 477 instructions requiring that only one location be served to report the entire census block as served in the 477 leads to significant over reporting of broadband service. VPS and its clients know from experience that this is the key issue leading to 477 data showing more coverage in and around their service areas than really exists. The rule should be changed to a much higher standard of serving at least two-thirds of a census block to report all that census block as served. Such a change would greatly reduce the service overreporting that is occurring today in 477 data.

A compelling example includes census blocks in Woodward, Iowa, of which Minburn Telecommunications, Inc., (Minburn) is the ILEC. Since 1999, Woodward's service technicians have located all its copper and fiber facilities throughout the Woodward exchange. With Minburn's experience, it has never identified any Mediacom cable, service markers or locate flags in any of the following census blocks, all reported as served by Mediacom on its 477 form. These census blocks are shown in the map illustrated in Exhibit C. With over 18 years of knowledge of what competitors have for services or network in its area, Minburn is confident that Mediacom has no network or service in the following census blocks that Mediacom has reported as served:

- 190150206001151
- 190150206001128
- 190150206001148
- 190150206001136
- 190150206001156
- 190150206001266
- 190490501003030
- 190490501003011
- 190490501004032
- 190490502002093
- 190490501003032
- 190490501003050
- 190490501003054

In order to provide fiber to its end users, the ILEC obtained a RUS loan of \$4.7M, which was accepted based on the existing rules at the time and the ability to pay back the loan from the resulting estimated cost support and revenues. To have the funding taken away now, based on a mapping system that does not reflect the true coverage of a competitor, places Minburn at risk for stability in providing broadband and voice services to all of its end users.

b. The use of Advertised Speed is a serious flaw in current reporting requirements

The use of "Advertised Speed", defined in the Form 477 Glossary as the speeds which represent the bandwidths that the "end user reasonably may expect to receive"

leads to overreporting in certain areas where advertised speed does not match actual capabilities. This is especially true with FWCs, where bandwidth is shared by all customers on a given cell site and speeds can vary greatly depending on the number of customers, distance from the tower and usage at any given time on any sector of the FWC service. Further, the advertised speed is often the average speed and there can be many FWC customers that receive far less speed when they are further away from the tower and receive weaker signal strength.

Even with several clarifications contained in the glossary definition, including one stating advertised speeds are to be distinguished from “theoretical capacity” or other concepts that do not represent the actual downstream and upstream bandwidths that the end user reasonably may expect to receive, the loose definition and title leaves too much room for interpretation by those filing the 477 form. This variation in reporting makes the data unreliable for funding determinations and changes need to be made to improve that data if such data will be used for USF funding determinations.

Providers should be required to list actual service capabilities based on, and consistent with, the FCC’s new speed testing rules¹⁰ currently under FCC consideration, rather than advertised speeds. If the new speed testing standards are appropriate for carriers receiving support, then they should also be the basis for all carriers filing the 477 form. If an unsubsidized competitor ever wins support in any auction it would then be required to meet the FCC’s public interest obligations and speed test rules. To be consistent, the FCC should use the speed test rules as the basis for all service

¹⁰ *Speed and Latency Performance Testing Order*, DA 18-710 (2018)

determinations in the 477 form. The speed test rules are the proper benchmark for all carriers if support will be impacted.

c. Current FCC Form 477 Data Verification Procedures are not Sufficient for Reliance on the Data to Determine USF Funding and Support Overlap

If the Commission is going to rely on Form 477 data to determine USF funding and support overlap and subject those areas to an auction, new audit procedures, penalties, and other 477 filing improvements need to be put in place first to ensure the reliability of the 477 data. Currently, there are insufficient FCC audit or verification procedures specifically relating to data reported by carriers such as FWCs that are not currently receiving broadband or voice support. Without such measures, FWCs have little incentive to spend the time and resources needed to ensure their 477 data accuracy. Many others, including NTIA and the U.S. Government Accountability Office, have also shown concern and made requests for a better FCC 477 verification process.¹¹

Yes, all companies must certify in the signing of the 477 form that the data is correct, however, it appears a significant number of carriers do not take this certification seriously. Therefore, without a better verification or audit process, it is difficult to weed out the significant inaccuracies that exist today in the data. According to the most recent Form 477 Frequently Asked Questions, it appears that only carriers certifying 477s that

¹¹**NTIA Requests Feedback on Improving Broadband Availability Data** (May 30, 2018), <https://www.ntia.doc.gov>. “The Form 477 data program is valuable, but the data is not independently validated or verified. It is also reported at the Census block level, so that can lead to inaccuracies that overstate availability – especially in rural areas where Census blocks are large.” **Also, United States Government Accountability Office, Report to Congressional Requesters, Broadband Internet FCC’s Data Overstate Access on Tribal Lands**, GAO-18-630 (September 2018), “Specifically, FCC’s method of collecting mobile and fixed broadband data from providers (the Form 477) does not accurately or completely capture broadband access on tribal lands because it (1) captures nationwide broadband *availability* data – areas where providers may have broadband infrastructure – but does so in a way that leads to overstatements of availability...”

flag an unusual trend in the FCC reporting system will be contacted for clarification by the FCC Form 477 team, as shown in the Q&A below:

Q: How will you handle situations where the accuracy of the data is being questioned? What will be the process to make corrections?

A: *(Revised 6/30/2015)* Typically, the Form 477 team checks reported subscribership data for unusual trends and contacts the filer for clarification. For example, reported data should compare reasonably to similar information reported in the filer's annual reports to shareholders or to the Securities and Exchange Commission (SEC). The Form 477 filing interface remains open to accept corrected data.

This limited FCC attempt to ensure 477 data accuracy falls far short when the FCC is placing greater emphasis on the use of 477 data to determine millions and even billions of dollars¹² in support.

Further, the Commission should establish an audit mechanism similar to the non-compliance and verification measures established by the Wireline Competition Bureau, the Wireless Telecommunications Bureau, and the Office of Engineering and Technology in the Speed and Latency Performance Testing Order adopted in July 2018 to promote greater accountability for CAF recipients.¹³ In this Order, the Commission requires providers subject to testing requirements to annually certify and report the test results to USAC, which may audit the test results.

Also, USAC conducts support audits based on a mix of random audits, risk-based audits, and targeted audits based on referrals from the FCC or whistleblower tips. This same approach would also be reasonable to better validate 477 reports. However, since this Order applies to carriers that are subject to potential withholding of support, which

¹² CAF II Auction 903 awards

¹³ *Speed and Latency Performance Testing Order*, DA 18-710, Para. 67 (2018)

would not be the case for unsubsidized carriers, other means of ensuring compliance must be established, as discussed in Section 2d below.

d. The FCC Needs to Make Use of its Fine Authority to Strengthen the Importance of the Accuracy and Truthful Certification of 477 Filings

FCC compliance enforcement must be established, including fines that are representative of the importance of the 477 information being certified, rather than existing minimal fines.¹⁴ There are no FCC audits of 477 forms and VPS is not aware that the FCC has ever fined or taken any enforcement action against any carrier for erroneous 477 filing errors. As the purpose of the Form 477 filings continues to evolve into a basis for support determination, the compliance enforcement should as well.

e. Even Members of the Commission are Concerned About Relying on Inaccurate 477 Data and Support Improvements in 477 Reporting

Commissioner O’Rielly recently included his thoughts on this problem in his statement accompanying an FCC Order in WC Docket No. 18-90.¹⁵

“Second, this order highlights the problem of relying on Form 477 data for purposes of providing USF subsidies—a use for which the data was never originally intended. While the flaws of such reliance are well-known, the Commission has inconsistently chosen to either rely on the data, as in the second ACAM offer, or reject it, as in the case at hand, in the absence of a formal challenge process, claiming the latter would be burdensome and time-consuming for staff. Rather, the Commission here chooses to allow Mescalero Apache to mount its own informal challenge, unencumbered by objective challenge process parameters derived through a notice-and-comment process. Does this mean that every time the Form 477 Data is wrong or fails to reflect actual deployment, parties—provided they have the necessary resources—can mount an informal challenge process to dispute the Commission’s reliance on existing maps? In my opinion, this ad hoc approach is not sufficiently transparent, leaves too much up to discretion, and is a poor substitute for a

¹⁴ 47 USC 220(e)

¹⁵ *Statement of Commissioner Michael O’Rielly accompanying FCC Order in WC Docket No. 18-90, FCC 18-187 (2018)*

thorough comment opportunity. The Commission's Form 477 Data problem is very real, and we don't help matters by foregoing a meaningful challenge process for purposes of convenience."

SUMMARY

The Commission has worked hard in its efforts to assist rural providers in reducing the digital divide and in its support to bring broadband to unserved rural locations. Without the improved measures outlined in VPS comments herein, these efforts will be undermined by inaccuracies in the very 477 data being used to identify where support is needed most. The Commission should conduct a challenge process whenever an incumbent is almost entirely overlapped and should make the VPS recommended changes herein so that it can rely on the 477 data that is needed to continue its efforts of bringing broadband to the rural areas most in need. In many cases that will be the incumbents with a local presence that have already invested millions in advanced networks that provide quality services and not unsubsidized competitors that have filed erroneous 477 data. VPS respectfully requests your consideration of these recommendations.

Respectfully submitted,

/S/ Larry Thompson

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February 27, 2019

Vicki Anderson
Webster-Calhoun Cooperative Telephone Assoc.
1106 Beek Street
Gowrie, IA 50543

RE: Breeze Broadband Communication, Inc. Operations

To whom it may concern:

Please let this letter serve as notice Breeze Broadband Communications, Inc. discontinued operations on November 1, 2018. Breeze Broadband Communications, Inc. is no longer offering any type of internet service.

Please do not hesitate to contact me with any questions.

Sincerely

A handwritten signature in blue ink, appearing to read "JOSE", is written over the word "Sincerely".

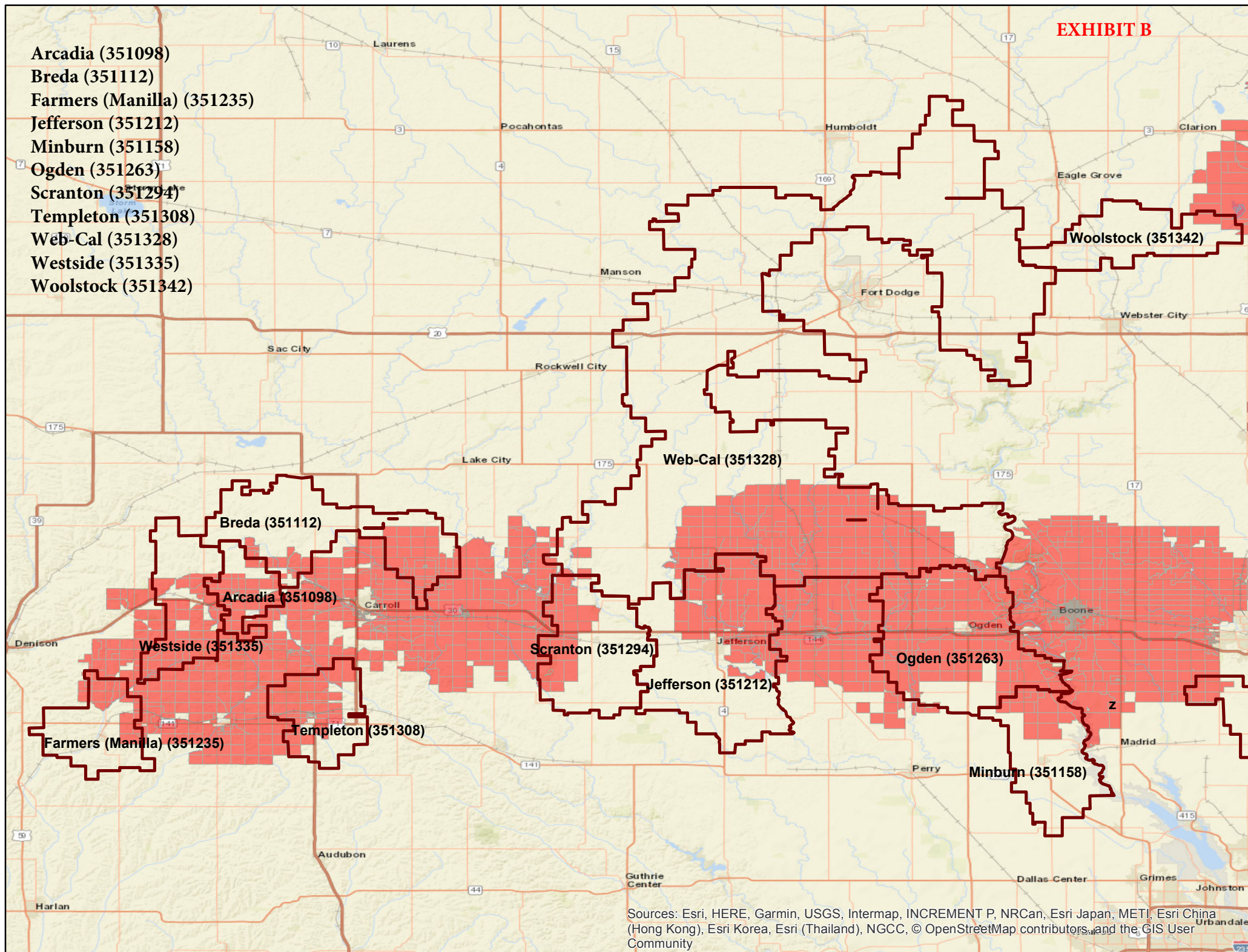
John A. Menicucci, Jr.
Secretary
Breeze Broadband Communications, Inc.

**Listing of Iowa LECs impacted by Breeze Broadband
Communications, Inc., 477 Data:**

1. ARCADIA TEL CO - Arcadia Telephone Cooperative
2. BRED TEL CORP. - Breda Telephone Corp.
3. CLARENCE TEL CO - Clarence Telephone Company, Inc
4. COLO TEL CO - Colo Telephone Company
5. ELLSWORTH COOP ASSN - Ellsworth Cooperative Telephone Association
6. FARMERS (MANILLA) - Farmers Mutual Cooperative Telephone Company-Harlan
7. HEART OF IOWA COMM. - Heart of Iowa Communications Cooperative
8. HUBBARD COOP ASSN - Hubbard Cooperative Telephone Association
9. HUXLEY COMM. COOP. - Huxley Communications Cooperative
10. JEFFERSON TEL CO -IA - Long Lines
11. MARTELLE COOP ASSN - Martelle Cooperative Telephone Association
12. MECHANICSVILLE TEL - Mechanicsville Telephone Company
13. MINBURN TELECOMM. - Minburn Telephone Company
14. MINERVA VALLEY TEL - Minerva Valley Telephone Company, Inc.
15. OGDEN TEL CO – IA - Ogden Communications, Inc
16. OLIN TEL CO, INC - Olin Telephone Company, Inc
17. PARTNER COMM. COOP. - Partner Communications Cooperative
18. RADCLIFFE TEL CO - Radcliffe Telephone Company
19. SCRANTON TEL CO - Scranton Telephone Company
20. SPRINGVILLE COOP TEL - Springville Cooperative Telephone Association, Inc.
21. TEMPLETON TEL CO - Templeton Telephone Company
22. WEBSTER-CALHOUN COOP - Webster-Calhoun Cooperative Telephone Association
23. WESTSIDE INDEPENDENT - Breda Telephone Corp
24. WOOLSTOCK MUTUAL - Woolstock Mutual Telephone Assoc.

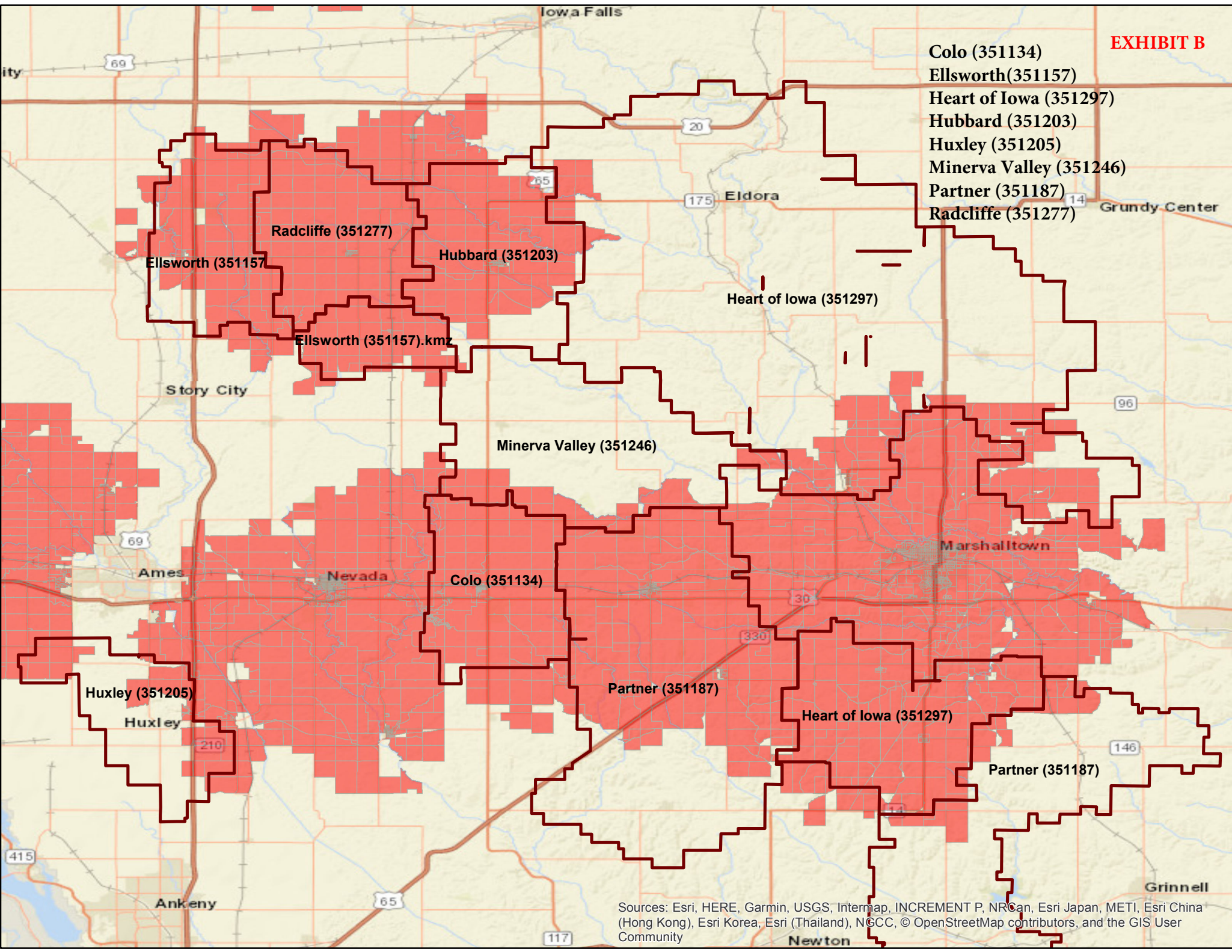
EXHIBIT B

Arcadia (351098)
Breda (351112)
Farmers (Manilla) (351235)
Jefferson (351212)
Minburn (351158)
Ogden (351263)
Scranton (351294)
Templeton (351308)
Web-Cal (351328)
Westside (351335)
Woolstock (351342)



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

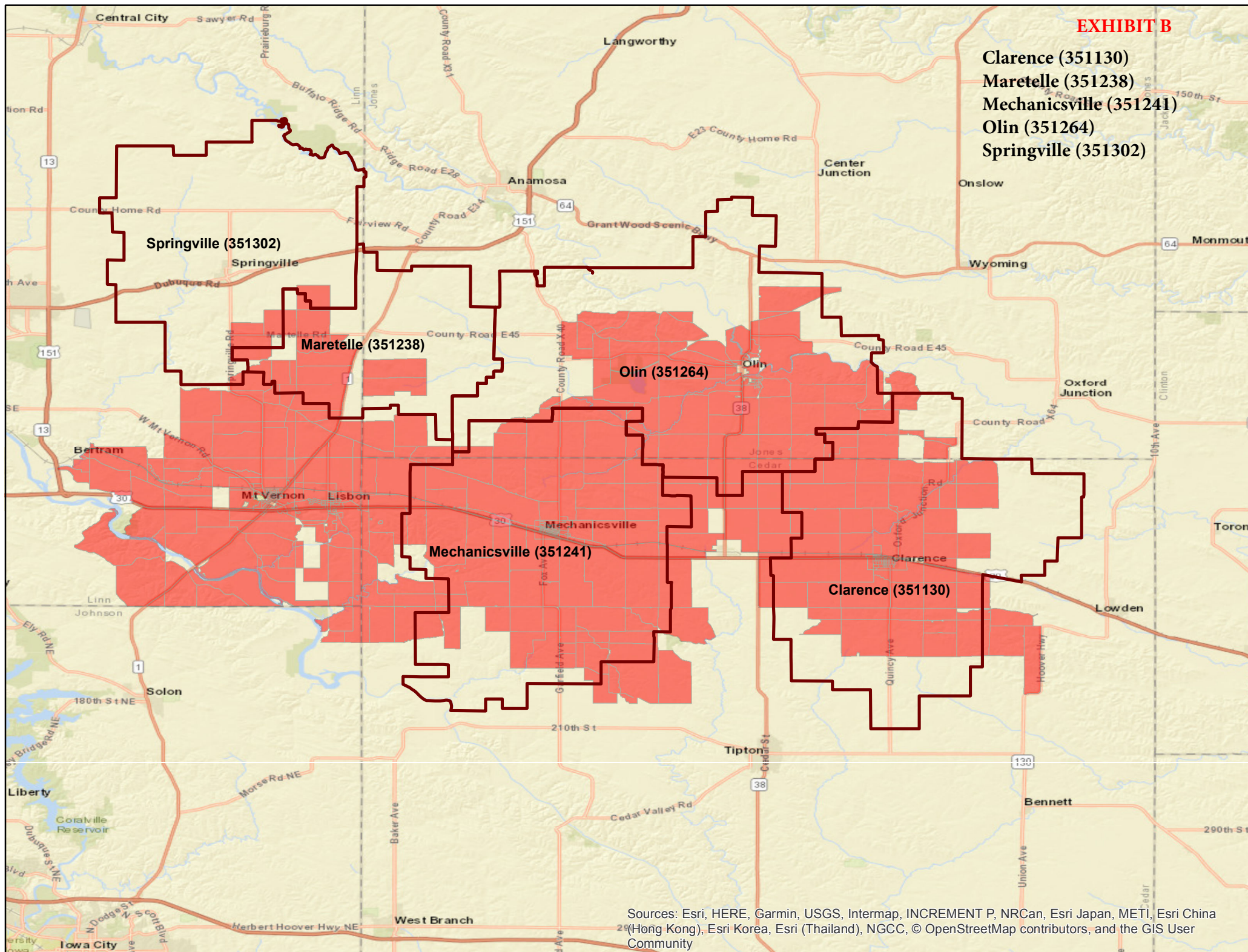
EXHIBIT B



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

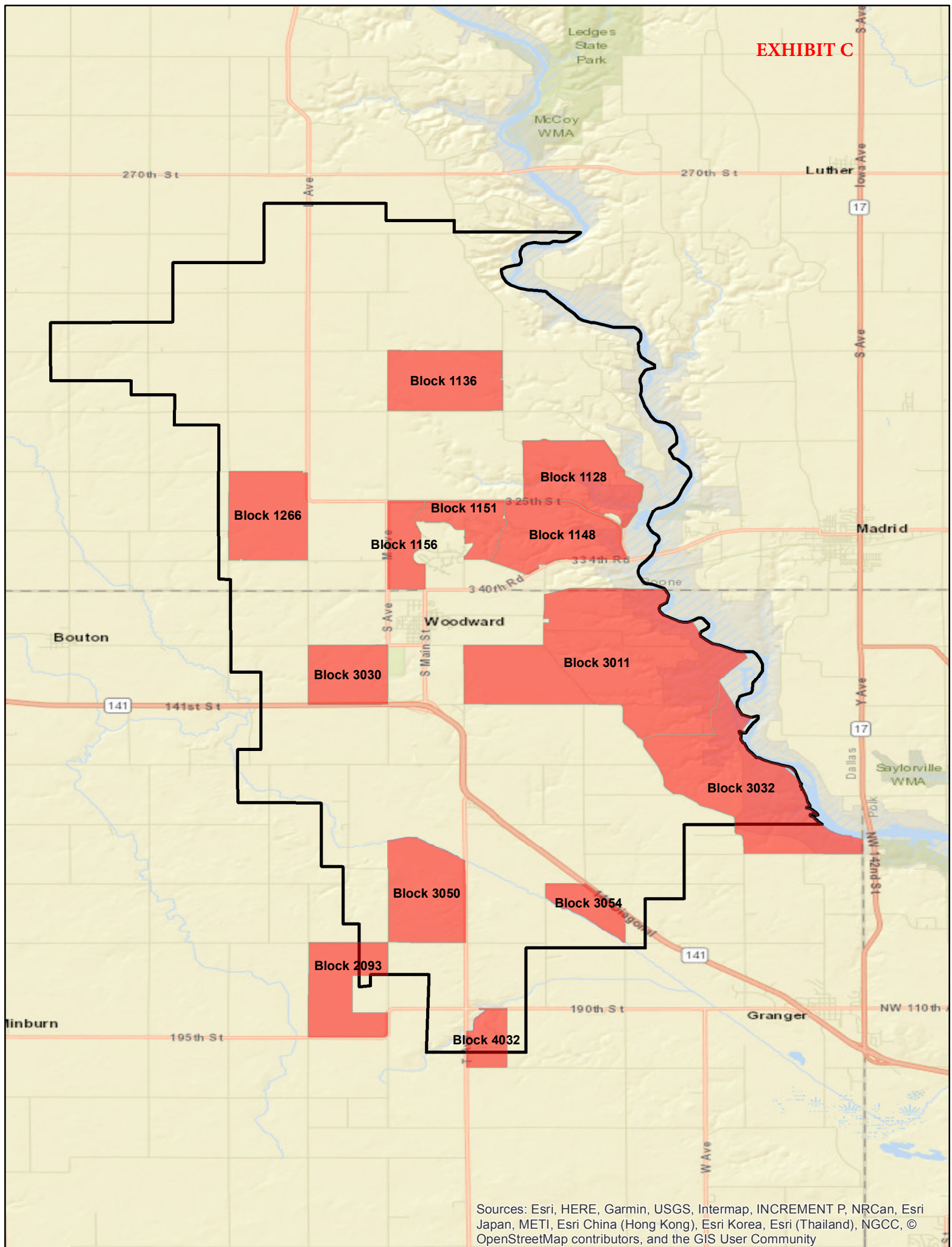
EXHIBIT B

Clarence (351130)
Maretelle (351238)
Mechanicsville (351241)
Olin (351264)
Springville (351302)



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

EXHIBIT C



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